

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

<b>APPELLANT:</b>	Pierre Messier	<b>GROUP ART UNIT:</b>	3771
<b>SERIAL NO.:</b>	10/528,006	<b>CONFIRMATION NO.:</b>	9028
<b>FILING DATE:</b>	January 5, 2006	<b>EXAMINER:</b>	Dixon, Annette Fredricka


**TITLE:** FACEMASK WITH FILTERING CLOSURE

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Dated: March 29, 2010  
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**REPLY BRIEF**

This Reply Brief is submitted in accordance with 37 C.F.R. § 41.41 in response to the Examiner's Answer mailed on January 29, 2010, in support of the appeal from the final rejection of claims 1 through 9, 11 through 16 and 18 through 27 in the above-identified application.

Appellants believe that no fees that are due. However, the Commissioner is hereby authorized to charge any additional fees that may be due, for further extensions of time or any other purpose associated with this submission, or credit any overpayment, to Appellants' undersigned counsel's Deposit Account Number 06-0923 with reference to docket number 102785-337-NP2.

**REAL PARTY OF INTEREST**

The real party of interest is Triosyn Holding, Inc, the assignee, pursuant to an assignment recorded in the records of the U.S. Patent and Trademark Office on 06/14/2005, at 06/14/2005 at Reel: 061333 beginning at Frame 0858. The beneficial owner is SafeLife, Inc.

### **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences pending in the above-identified application that will directly affect or that will be directly affected by the Board's decision in the present appeal.

### **STATUS OF CLAIMS**

Claims 1-9, 11-16 and 18-29 are pending in this application. Claims 10, 17 and 28-29 have been cancelled without prejudice or disclaimer. Claims 1-9, 11-16 and 18-27 are rejected and are currently under appeal.

### **STATUS OF AMENDMENTS**

Applicant filed an Amendment Under 37 C.F.R. § 1.116 on April 13, 2009 which was not entered by the Examiner.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

The following is a concise explanation of the subject matter of each of the independent claims, referring to the specification by page and line number for support.

- Claim 1 is directed to a facemask having a periphery adapted to abut a user's face; and a compressible gasket formed of a breathable filtering material on said periphery of the facemask. The breathable filtering material sits between the periphery of the facemask and a face of a user filling any space that may exist there between. The breathable filtering material provides an air path there through. The facemask has an area for filtering air which is interior to the periphery and not covered by the gasket. *See, e.g.,* Specification at p. 2, ll. 11-16; p. 3, ll. 1-6; p. 16, ll. 6-23; and Figures 5-6
- Claim 9 is directed to a facemask having a periphery adapted to abut a user's face and a compressible gasket formed of a breathable filtering material on said periphery of the facemask. The breathable filtering material includes an electret and contains an active agent. The breathable filtering material sits between the periphery of the facemask and a face of a user filling any space that may exist there between. The breathable filtering material provides an air path there through. *See, e.g.,* Specification at p. 2, ll. 11-16; p. 3, ll. 1-6; p. 7 l. 16 -- p. 9, l. 6; p. 13, l. 20 -- p. 14, l. 7; p. 16, ll. 6-23; and Figures 5-6

### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds for rejection to be reviewed on appeal are as follows:

- Claims 1 and 9 are rejected as being unpatentable under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,951,664 to Niemeyer. The Examiner alleges that Niemeyer discloses a combination comprising a permeable facemask having a periphery adapted to abut a user's face, a compressible gasket formed of a permeable filtering material on said periphery and a filtering area filling any space that may exist there between.
- Claims 2-8, 11-16, and 18-25 are rejected as being unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al. The Examiner alleges that Niemeyer discloses a combination comprising a permeable facemask having a periphery adapted to abut a user's face, a compressible gasket formed of a permeable filtering material on said periphery and a filtering area filling any space that may exist there between. The Examiner further contends that while Niemeyer does not teach incorporating an active agent in the gasket, it was known in the art to add an active agent to a compressible gasket, as allegedly taught by Rezuke.
- Claims 26 and 27 unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al. as applied to claim 25, and further in view of U.S. Patent No. 4,951,692 to Dhanakoti. The Examiner repeats the rejection of claims 2-8, 11-16 and 18-25 and further adds that Dhanakoti teaches applying an electrical charge to a facemask.

## ARGUMENT

In the ensuing argument, we address each of the Examiners grouped rejections in turn and argue some of those claims separately as well pursuant to 37 C.F.R. §41.37(c)(1)(vii). The groups of claims to be argued are as follows.

1. Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,951,664 to Niemeyer.

2. Claim 9 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,951,664 (the “664 patent”) to Niemeyer.

3. Claims 2, 7-8, 15, 16, 21-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al.

4. Claims 3-6, 11-14, and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al.

5. Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 as applied to claim 25, and further in view of U.S. Patent No. 4,951,692 to Dhanakoti.

For the reasons set forth below, Appellant respectfully traverses the rejections of claims 1-9, 11-16 and 18-27.

**I. Claims 1 and 9 are not anticipated by U.S. Patent No. 4,951,664 under 35 U.S.C. § 102(b)**

**A. Claim 1**

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,951,664 to Niemeyer. The Examiner alleges that Niemeyer discloses a combination comprising a permeable facemask **10** having a periphery adapted to abut a user’s face, a compressible gasket **30** formed of a permeable filtering material on said periphery and a filtering area filling any space that may exist there between. The



Examiner also contends that the compressible gasket is breathable and provides an air path there through. *See* Examiner's Answer at pages 3-4 and 6-7. Applicant respectfully traverses the Section 102 rejection.

In the Appeal Brief filed on October 30, 2009 ("Appeal Brief"), Applicant argued that Niemeyer fails to teach or suggest the following claim limitation in light of the original specification of the patent application: "a compressible gasket formed of a breathable filtering material on said periphery of said facemask adapted to provide an air path there through" (emphasis added). In particular, Applicant argued that the Examiner was not using the term "breathable" in a manner consistent with the correct use of the term in the facemask or filter arts. In the Examiner's Answer mailed on January 29, 2010, the Examiner argued that the definition provided by the Applicant "would constitute new matter if added to the Appellant's disclosure." *See* Examiner's Answer at page 7. Applicant respectfully disagrees with the Examiner's assertions.

The scope of claims is determined "not solely on the basis of claim language, but on giving claims their broadest possible reasonable construction 'in light of the specification as it would be interpreted by one of ordinary skill in the art.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (emphasis added). Furthermore, the specification need not use an "explicit definitional format" but may, instead, "define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents." *Bell Atlantic Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (internal quotes omitted). When a patentee "uses a claim term throughout the entire patent specification, in a manner consistent with only a single meaning, [the patentee] has defined that term by implication." (emphasis added) *Id.* at 1271.

It is clear from the original specification that "a compressible gasket formed of a breathable filtering material on said periphery of said facemask adapted to provide an air path there through" (emphasis added) means that the gasket is formed such that there is a breathable air path through the gasket. Every use of the terms "breathable" and "there through" in the instant specification is consistent with this meaning. For example, the specification states:

According to the present invention there is provided a *closure material* made of substrate having electrostatic properties ... where the material is a ... breathable material of a tri-dimensional structure and is placed around the mask or air filter in order to *not create a so-called airtight junction* but instead *creates a breathable closure* that actually covers all the contours of the different geometrical surface to provide[ ] a permeable closure, having filtering properties. ... Thus, which prior art facemask[s] attempt to block air flow at the closure, the facemasks of the present invention act[ ] as a gasket that allows air there through.

See Specification at page 16, ll. 4-22 (emphasis added).

Contrary to the Examiner's assertion (see page 6 of Examiner's Answer), it is clear from the specification that the term "breathable" is *not* being used in reference to apparel or clothing, where breathability has to do with the ability of fabrics to wick away moisture. The art at issue in the instant application is the facemask art, not the apparel art. One of skill in the facemask art would interpret the claim limitation in claim 1, in light of the specification, to mean that the filtering material provides a *breathable* air path *through the compressible gasket* of the facemask. A gasket that is designed to maintain an air-tight seal, but for which there may arguably be some *de minimus* air path there through -- such as a gasket covered with a latex seal -- does *not* teach or suggest the claim limitation. Also, where there is no breathable air path through the gasket -- e.g., where the gasket has an air-permeable interior portion with a latex covering designed to prevent breathable air from passing through the gasket -- there is no teaching or suggestion of the claim limitation.

In contrast to the compressible gasket in claim 1 of the instant application, the compressible gasket in Niemeyer -- which the Office interprets as compressible strip (ref 30) in conjunction with the sealing material (ref 32) in contact with the user's face along the periphery of the mask -- prevents the passage of breathable air there through and, thus, does not teach or suggest the limitation of the instant claim 1.

As the configuration of the face changes or as masks are worn by different people, the compressibility of strip 30 provides for these various configuration and in conjunction with third material 32 maintains a seal thereby requiring breathable air to pass through filtering layer 16 [not the gasket].

See Niemeyer at Col. 5, ll. 41-51 (emphasis and bracketed parenthetical added). See also Niemeyer at Col. 5, ll. 34-37; Col. 6, ll. 12-22; and Col. 6, line 26.

Applicant recognizes that there is sometimes a “fine line between reading a claim in light of the specification and reading a limitation into the claim from the specification.” *Bell Atlantic*, 262 F.3d at 1270. Furthermore, Applicant recognizes that a claim term should be given its broadest possible meaning in light of the specification as it would be interpreted by one of skill in the relevant art. In this case, however, Applicant is not seeking to improperly import a claim limitation from the specification by narrowly defining a term commonly known in the relevant art to have a broader meaning. See, e.g., *In re Bigio*, 381 F.3d 1320 (refusing to limit the known term “hair brush” to mean a brush for only scalp hair). Instead, Applicant refers to the specification of the instant application to inform interpretation by one of skill in the facemask art of the term “breathable” as used in the claim limitation, “a compressible gasket formed of a breathable filtering material on said periphery of said facemask adapted to provide an air path there through.” Applicant submits that no broader meaning is possible than the one described above -- that the gasket is formed of a material that allows a breathable air path through the gasket. The Examiner does not provide an alternative definition of the term “breathable” that is consistent with the facemask art, or that is consistent with the use of the term in the instant specification.

Additionally, ordinary meaning refers to how the term is used in the field of invention; *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299, 53 USPQ2d 1065, 1067 (Fed. Cir. 1999)(“[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning.”). (emphasis added). Moreover, “it is the person of ordinary skill in the art in the field of invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and have knowledge of any special meaning and usage in the field.” *Id.* (emphasis added). In the facemask art, the term “breathable” refers to resistance to air flow. As indicated in the Appeal Brief, from a technical standpoint, a breathable material has a low pressure drop across the material. The low pressure drop not only facilitates breathing but provides comfort to the user. If a

material is designed to form an airtight seal, there would be a very high pressure drop across the material and hence, the material would not be classified as breathable.

The definition of “breathable” provided in the preceding paragraph are entirely consistent with the Applicant’s use of the term in the originally filed specification. For instance, the specification states:

The electrostatic filter of the present invention may be made of a spongy or other *breathable* nonwoven material so as to minimize the pressure differential, thus preventing air from being forced through the gaps. Further, it effectively makes the *gasket* used to create a closure between the user and the facemask out of a thin filter having a low-pressure drop.....

See Specification at p. 2, ll. 11-15 (emphasis added). This passage indicates that the term “breathable” is being used consistently with how it is traditionally applied in the facemask art. Hence, a breathable gasket has a low pressure drop and thus allows air to freely pass through (*i.e.*, low air-resistance). As such, the Examiner’s position that Applicant’s definition of the term “breathable” is not supported in the original disclosure is incorrect.

Even if Applicant did not indicate a specific meaning of the term “breathable” in the original disclosure, the Applicant’s definition would still be correct being that the term is used consistent with its ordinary meaning in the usage of the field of invention. In the Appeal Brief, Applicant provided product specifications of several commercially available facemasks. One important parameter is breathability, which was defined generally as follows:

Measures the difference of air pressure of the inside of the mask and outside of the mask; measures the *pressure drop* across the facemask and is expressed in mm air/cm<sup>2</sup>. It is an indication of the effort required to breath through the mask.

In the Examiner’s Answer, the Examiner states that “[e]xaminer appreciates that breathability has a specific meaning in the facemask arts that is different from the generic term “breathable”. See Examiner’s Answer at page 7 (emphasis added). Here, the Examiner is admitting that the term “breathability” has a specific definition in the facemask arts. However, the Examiner appears to be arguing that the term “breathable”

does not have a specific definition in the facemask arts, and hence, should be given a broader definition. Applicants respectfully disagree. The Examiner fails to appreciate that “breathable” describes an article which has the property of breathability. Clearly, by definition, a breathable material would have a high level of breathability. Accordingly, if the term breathability has a specific definition in the facemask arts, as the Examiner admits, so does the term “breathable”.

Additionally, the Examiner has not provided evidence to support her interpretation of the term “breathable” in the facemask or filtering arts. A simple search of the patent literature reveals that the term “breathable” is used very commonly in the facemask arts. Moreover, the term “breathable” is used in the art as described by Applicant in the instant specification. For example, U.S. Patent No. 3,316,904 (“the ‘904 patent”) is directed to nonwoven facemasks. The ‘904 patent makes the following statements regarding breathable filtering materials:

Breathability of a filter media is usually determined by the pressure drop across the media of an air stream. In an Army Chemical Warfare study it was noted that respiratory masks are designed to provide a pressure drop of about 0.4 in. through the filter media when the media is placed in an air stream having a velocity of 10 liters per minute. A mask is still considered breathable for adults and children at 0.8 in. pressure drop and for male adults at 1.2 inches pressure drop (AIA Archives of Industrial Health, August 1959, vol. 20, pp. 91-95).

See the ‘904 patent at col. 6, ll. 22-31 (emphasis added). Consistent with the facemask product specifications provided in the Appeal Brief, breathability of a filtering media is defined in terms of pressure drop. Additionally, the term “breathable” is also used to refer to a material with a low pressure drop. Thus, contrary to the Examiner’s assertion that the term breathability has a different meaning than in the facemask art than the term “breathable”, the two terms are used consistently to define a property of the filter media. Breathability is used to define a property of the filtering material defined in terms of pressure drop. A breathable material has a low pressure drop and thus, provides little resistance to air flow.

Another example, U.S. Patent No. 5,645,057 (“the ‘057 patent”), is directed to breathable nonwoven facemasks. In describing properties of particular meltblown webs, the ‘057 patent states that “the meltblown web provides good barrier properties when incorporated in the mask without adversely impacting the comfort of the wearer of the mask, i.e., the *breathability of the mask*, as measured by the drop in *pressure across the fabric (AP)*.” See the ‘057 patent at col. 1, ll. 46-50. Additionally, the ‘057 patent states:

The resultant nonwoven webs exhibit a variety of desirable properties. The very small average diameter of the microfine fibers of the webs can provide improved filtration and barrier properties. Yet despite the decreased fiber size and resultant improved barrier properties, the webs of the invention can be incorporated into a face mask without significantly impairing or diminishing the comfort of the mask to the wearer. For example, the webs are breathable, preferably exhibiting a pressure drop across the web of 0.3 to 0.8. In contrast, conventional meltblown webs used as filtration media have an average fiber diameter of 1.8 to 3 microns and higher, a basis weight from 20 to 40 grams per square meter, and a pressure drop across the web of 2.0 to 3.0.

*Id.* at Col. 2, ll. 25-39 (emphasis added). Again, the terms “breathability” and “breathable” are both defined in terms of pressure drops across the filter material. Additionally, the ‘057 patent clearly specifies that nonwoven webs comprised of nonwoven filtration media with a specific pressure drop (0.3 to 0.8 inches) are breathable while prior art nonwoven webs with a higher pressure drops (2.0 to 3.0 inches) are not breathable. This does not mean that the prior art filters with the high pressure drop completely block the penetration of air through the nonwoven media. If that were the case, these filters would suffocate the user. The high pressure drop simply means that the filtration media is highly resistant to the penetration of air, and hence, is not breathable.

Another example, U.S. Patent No. 5,817,584 (“the ‘584 patent”), is directed to high efficiency breathing facemask fabrics. In the Background section of the ‘584 patent, Patentees describe prior art nonwoven facemask filtration media:

As filter media, some of the desired characteristics of nonwoven fabrics are that they be permeable to the fluid being filtered yet have a high filtration efficiency. Permeability to the fluid being filtered is quite important as low permeability could result in a high pressure drop across the filter. In an application such as a breathing mask, a high pressure drop would mean the wearer would have a difficult time drawing enough air to breath comfortably. One example of a previous attempt at a breathable mask is taught in U.S. Pat. No. 4,547,420 to Krueger et al. which describes bicomponent meltblown webs which may be electrically charged. Meltblown webs unfortunately tend to have small pore sizes due to high densities and smaller fibers and therefore pressure drops which are undesirably high.

See the '584 patent at col. 1, ll. 26-39 (emphasis added). Again, "breathable" is a property defined in terms of pressure drop and difficulty of breathing. If the filtration media has a large pressure drop, *i.e.* is not breathable, the user would have a difficult time breathing. As stated above, the high pressure drop does not necessarily preclude any air from passing through the filtration media. It simply means that the filter media provides a significant resistance to the passage of air and hence, is not breathable.

The examples provided above, and many others from the patent and general literature, plainly reveal how the term "breathable" is used in the facemask and filter arts. Moreover, the examples plainly show that Applicant is using the terminology consistent with its usage in the facemask and filter arts. Niemeyer, on the other hand, clearly does not disclose a breathable filtering material. In fact, Niemeyer actually teaches the exact opposite. In the SUMMARY OF INVENTION section, Niemeyer defines the facemask as having a filtering mechanism **16**, a conforming mechanism **30** and a sealing mechanism **32**. The conforming mechanism **30** is attached to the periphery of the filtering mechanism (facemask) and is designed to abut a person's face. To insure impermeability to air, Niemeyer adds the sealing mechanism **32** to the inner portion of the conforming mechanism **30**. See Niemeyer at Column 2, ll. 30-42. In defining the sealing mechanism **32**, Niemeyer states the following:

A third material, comprising the sealing mechanism, is attached to the side of the foam strip opposite the side

attached to the filter material and extends for attachment to the filter material. In this way, the impenetrable material is in contact with the person's face, and provides a seal between the face and the filter material.

*Id.* at Col. 2, ll. 47-53 (emphasis added). Niemeyer goes on to state the following:

The method of manufacture of the present mask insures impermeability of air during a breathing cycle across the conforming mechanism and the sealing mechanism.

*Id.* at Col. 3, ll. 23-26 (emphasis added). Claim 1 of Niemeyer also indicates that the sealing mechanism (third material) is impermeable to air.

Accordingly, Niemeyer discloses a gasket that **forms a seal** with the face of a user and is thus impermeable to air. Niemeyer notes that the third material “**always maintains a seal.**” *Id.* at col. 6, ll. 25-26 (emphasis added). Hence, it is clear that Niemeyer’s gasket forms an airtight seal between the mask and the user’s face. A seal, by definition, cannot be breathable because its entire purpose is to block the passage of air. Technically, this translates to a very high pressure drop across the material. As stated above, claim 1 of the pending application claims compressible gasket formed of a breathable filtering material. A filtering material that is breathable is directly opposite to a material that forms an airtight seal.

In the Examiner’s Answer, the Examiner does not respond to these arguments but rather asserts that “the third material **32** allows leakage of the gas from the compressible gasket **30** to the environment or patient for particles smaller than 5 microns.” *See* Examiner’s Answer at pages 6-7. Applicant argues that the Examiner is again not taking into account the ordinary definition of the term “breathable” as used in the facemask art. Even if, as the Examiner alleges, a small amount of air can pass through the third material, this by no means implies that the material is breathable. As discussed above, “breathable” relates to resistance of air and pressure drop across a material. Many filtering materials, including prior art face masks alluded to in the patents discussed above, allow some air to pass through but are not breathable. These masks offer a high level of resistance across the mask which translates to a high pressure drop, making breathing difficult. However, based on the Examiner’s definition, these prior art masks



would still be categorized as breathable. Applicant argues that the Examiner is defining the term “breathable” so broadly that it would fail to take on any significant meaning in the facemask art.

It is further noted that Niemeyer states that sealing material **32** may be made out of the material in condoms, such as latex. *See* Niemeyer at Col. 5, ll. 15-20. Such materials would not be classified as breathable, even if there is a minimal amount of leakage. In fact, a mask made of latex material would be a suffocation hazard.

With respect to leakage, the disclosure of Niemeyer actually stands in direct contrast to the Examiner’s arguments. In the BACKGROUND section, Niemeyer discusses problems with leakage in prior art masks due to an inadequate seal between the mask and the user’s face. Niemeyer’s mask is designed to prevent any leakage. Hence, Niemeyer states the following:

Third material **32** must be elastic so as to stretch as strip **30** compresses or expands. Third material **32** must also be soft, as indicated, so that localized forces causing stretching are not transmitted so as to pull and tighten the third material and cause it to overpower the conforming characteristic of the second material and thereby allow leakage between third material **32** and the facial skin of the wearer.

*Id* at Col. 5, ll. 21-27. Hence, contrary to the Examiner’s argument, the third material **32** does not allow leakage of the gas from the compressible gasket to the patient.

Furthermore, Niemeyer does not teach a compressible gasket “adapted to provide an air path there through”, as recited in claim 1. The Examiner argues that the limitation is met by the fact that “compressible gasket **30** of Niemeyer allows air to be forced out of or adsorbed into during compression and expansion.” *See* Examiner’s Answer at page 3. While Applicant agrees that the gasket disclosed in Niemeyer appears to allow air in and out of the *compressible material* (only), the Niemeyer gasket does not allow air to penetrate through the gasket itself, and, hence, does not provide an air path there through.

Both Niemeyer and the instant specification recognize the deficiencies with prior art facemasks. Facemasks have generally been developed to create an airtight seal between the face of the user and the periphery of the mask. However, for various reasons, the seal is difficult to maintain and unfiltered air is forced through gaps created

by an imperfect fit. Accordingly, both Niemeyer and the present invention are directed to solving this problem. However, Niemeyer approaches the problem differently from the present invention. The compressible gasket abutting the user's face in the present invention is specifically designed to allow air to pass through. As such, the compressible material is acting as a filter, *i.e.*, air goes through while particles are trapped or deactivated.

In contrast, Niemeyer's compressible gasket is not designed to let air through the periphery of the mask. Rather, Niemeyer's facemask is designed to create a better airtight seal between the periphery of the facemask and the user's face. Such a seal is achieved by adding compressible strip 30 around the facemask which is covered by sealing mechanism 32. The compressible strip 30 minimizes holes generated from an imperfect fit because it adapts to changes in configuration of the user's face. However, the compressible strip 30 is not functioning as a filter because air is being blocked from penetrating through the strip by the presence of sealing material 32. As such, all of the air goes through filtering mechanism 16, which encloses the nose and mouth of the user. This operation of the respective elements of Niemeyer's mask is made clear by the following statement:

As the configuration of the face changes or as masks are worn by different people, the compressibility of strip 30 provides for these various configurations and in conjunction with third material 32 maintains a seal thereby requiring breathable air to pass through filtering layer 16.

See Niemeyer at Col. 5, ll. 46-51 (emphasis added). Hence, Niemeyer's compressible gasket does not provide for an air path there through but rather, blocks the passage of air there through.

In fact, the entire disclosure of Niemeyer reveals that air is blocked from going through the periphery of the mask. For instance, Niemeyer states that impermeable material 32 "always forms a seal." *Id.* at col. 6, l. 26. This ensures "impermeability of air during a breathing cycle across the conforming mechanism and the sealing mechanism." *Id.* at col. 3, ll. 23-26. Clearly, then there is no air path through the Niemeyer gasket. In fact, if such an air path existed, this would be contrary to Niemeyer's proposed invention where air passes through filtering layer 16. By

intentionally forming a seal, air is blocked from going through the periphery of the facemask (*i.e.*, the gasket) and hence the limitation of providing an air path there through cannot be met. It is further pointed out that language relating to the “impermeable seal” is repeated in both the Abstract and independent claim 1 of Niemeyer.

This point is further illustrated by considering the structure of compressible strip **30** as described in Niemeyer. The compressible strip **30** preferably has a rectangular cross-sectional shape. *See* Niemeyer at col. 4, ll. 59-64. Hence, the compressible material has several sides. One side of compressible strip **30** is left open to allow air to enter. However, the side of compressible strip **30** that contacts the face that would normally contact the face is attached to sealing material **32**. *Id.* at col. 6, ll. 6-11. As such, “[d]uring compression and expansion, air can flow into or out of strip **30** through the side of strip **30** which is free of third material **32**.” *Id.* at col. 6, ll. 26-29. Although compressible strip **30** can expand or contract due to air flowing in and out, “third material **32** *always maintains a seal*.” *Id.* at col. 6, ll. 25-26 (emphasis added). The language here is very clear. Because sealing material **32** must maintain a seal, by definition, there is no air path through the gasket. Air can go in and out of strip **30** but it does not go through.

For at least these reasons, Applicant requests that the rejection of claim 1 over 35 U.S.C. § 102(b) be withdrawn.

#### **B. Claim 9**

Claims 9 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,951,664 to Niemeyer. The Examiner provides the same reason for rejecting claim 9 as was provided by claim 1. However, as pointed out in the Appeal Brief, the Examiner does not comment on the added limitation in claim 9: an active agent incorporated therein of said periphery. In fact, on page 3 the Office Action dated February 17, 2009 the Examiner states that Niemeyer “does not expressly disclose the incorporation of active agents within the compressible gasket.” The Examiner was not responsive to this argument in the Examiner’s amendment. Because at least three limitations of claim 9 are not present in Niemeyer, the section 102 rejection should be removed.

Thus for at least this reason and at least the reason expressed with respect to claim 1, Applicant requests that the rejection of claim 9 over 35 U.S.C. § 102(b) be withdrawn.

**II. Claims 2-8, 11-16, and 18-25 are not obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 4,951,664 in view of U.S. Patent No. 5,582,865**

In the Appeal Brief, Applicant provided a response to overcome all of the section 103 rejections. The arguments are reproduced below. It is noted that in the Examiner's Answer, none of Applicant's arguments were addressed. Nonetheless, for reasons discussed below, Applicant maintains that the Examiner has not provided any reasonable basis for combining the cited prior art references.

**A. Claims 2, 7-8, 15-16, and 21-25**

Claims 2, 7-8, 15-16 and 21-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al. The Examiner alleges that Niemeyer discloses a permeable facemask but does not expressly disclose incorporation of an active agent. The Examiner further alleges that it was well-known to incorporate active agents into compressible gaskets, as exemplified by Rezuke. *See* Office Action from February 17, 2009 at page 3. Applicant respectfully traverses the Section 103 rejection.

Claims 2, 7-8, 15-16, 21-25 each are generally directed to a combination comprising a facemask and a breathable gasket containing an active agent. Niemeyer, which was discussed at length in the previous section, does not teach a breathable gasket containing an active agent. The Examiner contends that Niemeyer teaches a permeable facemask. While this may be true, the permeable portion of the Niemeyer facemask is the filtering layer **16**, not the gasket. Hence, the Examiner's remarks concerning the permeability of the Niemeyer facemask are not relevant to the pending claims.

Presumably, the Examiner is arguing that it would be obvious to put an active agent into the conforming mechanism **30** of the Niemeyer facemask, thus creating a biocidal gasket material. However, the Examiner is reaching the erroneous conclusion that Niemeyer's conforming mechanism **30** is intended to be used as a filter, as in the present claims. Clearly, this is not the case. As discussed above, Niemeyer's conforming

mechanism **30** with its attached impermeable seal **32** is designed to form an airtight seal, thus rendering it impermeable to air. Accordingly, Niemeyer does not contemplate the conforming mechanism **30** as a filtering mechanism, as with the presently claimed breathable gasket. As such, placing an active agent into the conforming mechanism **30** would serve no purpose in the mask described by Niemeyer. Moreover, it is possible that placing such an active agent into the conforming mechanism **30** would disrupt the association between the conforming mechanism **30** and the sealing mechanism **32**, this hindering the desired intention of the mask.

The Examiner is also erroneous in asserting that Rezuze discloses a compressible gasket with an active agent. Rezuze discloses a nonwoven composite material comprising a nonwoven carrier impregnated with chemical absorbent. Rezuze further teaches that the composite material **16** can be molded into a face mask. *See* Rezuze at Col. 3, ll. 5-9. A gasket is defined as an object that fills the space between two other objects when under compression. Rezuze does not disclose or suggest that the composite material **16** can be molded into a gasket, particularly a gasket adapted to be placed around the periphery of a facemask.

Thus, both Niemeyer and Rezuze would not solve the problems alluded to in the present application. Unlike Niemeyer and Rezuze, Applicant has determined that by allowing air to pass through the gasket on the periphery of a mask rather than creating an airtight seal, problems of having unfiltered air passing through gaps in the facemask can be substantially or wholly avoided. Applicant has thereby developed a new method of using a protective facemask by using a gasket on the periphery of the mask as a primary filtering element. The addition of an active agent ensures high antibioid efficiency of air passing through the breathable gasket.

As there appears to be no basis for combining Niemeyer and Rezuze as the Examiner suggests, the Examiner appears to be using hindsight based solely on the present specification. It is impermissible to engage in a hindsight reconstruction of the claimed invention, using the Applicant's structure as a template, and selecting elements from references to fill in the gaps. *Interconnect Planning*, 744 F.2d 1132, 1143 (Fed. Cir. 1985).

For at least these reasons, Applicant requests that the rejection of claims 2, 7-8, 15-16 and 21-25 over 35 U.S.C. § 103 be withdrawn.

**B. Claims 3-6, 11-14, and 18-20**

Claims 3-6, 11-14, and 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al. The Examiner alleges that Niemeyer discloses a permeable facemask but does not expressly disclose incorporation of an active agent. The Examiner further alleges that it was well-known to incorporate active agents into compressible gaskets, as exemplified by Rezuke. See Office Action from February 17, 2009 at page 3. Applicant respectfully traverses the Section 103 rejection.

Claims 2, 7-8, 15-16, 21-25 each are generally directed to a combination comprising a facemask and a breathable gasket which is a porous dielectric carrier. Niemeyer, which was discussed at length in the previous section, does not teach a breathable gasket that provides an air path there through. Also for reasons discussed with respect to the rejections over claims 2, 7-8, 15-16, and 21-25, Rezuke does not teach a compressible gasket material. Combining the two references does not arrive at the presently claimed invention. In addition, the Examiner provides no motivation or other relevant basis for combining the references as such.

For at least these reasons, Applicant requests that the rejection of claims 3-6, 11-14, and 18-20 over 35 U.S.C. §103 be withdrawn.

**III. Claims 26-27 are not obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 4,951,664 in view of U.S. Patent No. 5,582,865, and in further view of U.S. Patent No. 4,951,692**

Claims 26-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,951,664 to Niemeyer in view of U.S. Patent No. 5,582,865 to Rezuke et al., and in further view of U.S. Patent No. 4,951,692 to Dhanakoti. The Examiner alleges that Niemeyer discloses a permeable facemask but does not expressly disclose incorporation of an active agent. The Examiner further alleges that it was well-known to incorporate active agents into compressible gaskets, as exemplified by Rezuke. See

Office Action from February 17, 2009 at page 3. The Examiner additionally alleges that Dhanakoti teaches the use of a layered electrostatic charge across a facemask. Hence, the Examiner contends that it would be obvious to combine the three references to arrive at the invention claimed in claims 26-27 of the present invention. Applicant respectfully traverses the Section 103 rejection.

For reasons already discussed in Section II, the Examiner has not provided a reasonable basis for combining Niemeyer and Rezuze without the use of improper hindsight. The same holds true for incorporating an electret into the breather gasket situated on the periphery of the inventive facemask. The purpose of adding an electret, to a facemask, as described in Dhanakoti, is to reduce the pressure drop and increase filtering efficiency of the facemask. Due to the fact that Niemeyer is using the conforming mechanism **30** with its attached impermeable seal **32** as an airtight seal, decreasing pressure drop by adding an electret to the conforming mechanism **30** would work against the intended purpose of the conforming mechanism **30** disclosed in Niemeyer.

In the present invention, incorporating the electret in the breathable gasket when used in combination with an active agent confers outstanding filtration efficiency to the gasket. This increased filtration effectiveness was noted by the Examiner in the Interview Summary from the Examiner dated July 22, 2009.

For at least these reasons, Applicant requests that the rejection of claims 26-27 over 35 U.S.C. § 103 be withdrawn.

### CONCLUSION

In view of the arguments above, Appellants respectfully submit that claims 1-9, 11-16 and 18-27 are patentable and request the Board of Patent Appeals and Interferences to reverse all of the Examiner's rejections as to each of these claims.

To the extent any extension of time under § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to Deposit Account No. 06-0923.

Respectfully submitted,

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**CLAIM APPENDIX TO REPLY BRIEF UNDER RULE 41.37(c)(1)(viii)**

1. (Previously presented) A combination comprising:  
a facemask having a periphery adapted to abut a user 's face; and a compressible gasket formed of a breathable filtering material on said periphery of said facemask adapted to provide an air path there through and to sit between said periphery of said facemask and a face of a user thereby filling any space that may exist there between: said facemask having an area for filtering air which is interior to said periphery and not covered by said gasket.
2. (Previously presented) The combination as in claim 1 wherein said compressible gasket includes an active agent incorporated therein.
3. (Previously presented) The combination as in claim 1 wherein said compressible gasket comprises a porous dielectric carrier.
4. (Previously presented) The combination as in claim 3 wherein said porous dielectric carrier is a non-woven material.
5. (Previously presented) The combination as in claim 3 wherein said porous dielectric carrier is a fiber based material having a fibrous three dimensional matrix structure.
6. (Previously presented) The combination as in claim 3 wherein said porous dielectric carrier is a sponge like material have an open cell matrix structure.
7. (Previously Presented) The combination as in claim 2 wherein said active agent is selected from the group consisting of metals and chemical compounds.
8. (Previously presented) The combination as in claim 2 wherein said active agent is an iodinated resin.

9. (Previously presented) A combination comprising:  
a facemask having a periphery adapted to abut a user's face; and  
a compressible gasket formed of a breathable filtering material having an active agent incorporated therein on said periphery of said facemask adapted to provide an air path there through and to sit between said periphery of said facemask and a face of a user thereby filling any space that may exist there between; said facemask having an area for filtering air which is interior to said periphery and not covered by said gasket; wherein said compressible gasket includes an electrostatic charge there across.
10. (Cancelled)
11. (Previously presented) The combination as in claim 9 wherein said compressible gasket comprises a porous dielectric carrier.
12. (Previously presented) The combination as in claim 11 wherein said porous dielectric carrier is a non-woven material.
13. (Previously presented) The combination as in claim 11 wherein said porous dielectric carrier is a fiber based material having a fibrous matrix structure.
14. (Previously presented) The combination as in claim 11 wherein said porous dielectric carrier is a sponge like material have an open cell matrix structure.
15. (Previously presented) The combination as in claim 9 wherein said active agent is selected from the group consisting of metals and chemical compounds.
16. (Previously presented) The combination as in claim 9 wherein said active agent is an iodinated resin.
17. (Cancelled)

18. (Previously presented) The combination as in claim 5 wherein said fiber matrix structure is configured to entrap the active agent in said three dimensional matrix structure.
19. (Previously presented) The combination as in claim 5 wherein the active agent is intermeshed with the fiber based material.
20. (Previously presented) The combination as in claim 4 wherein said nonwoven material comprises a polymer fiber selected from the group consisting of nylon, polyethylene and polypropylene.
21. (Previously presented) The combination as in claim 2 wherein said active agent is a biostatic and/or biocidal material.
22. (Previously presented) The combination as in claim 2 wherein the active agent is selected from the group consisting of silver, copper, halogenated resin, and activated carbon.
23. (Previously presented) The combination as in claim 2 wherein the active agent is a metal, said metal selected from the group consisting of aluminum, barium, boron, calcium, chromium, copper, iron, magnesium, manganese, molybdenum, nickel, lead, potassium, silicon, sodium, strontium and zinc.
24. (Previously presented) The combination as in claim 2, wherein the active agent is a chemical compound selected from the group consisting of N-methyl piperazine, potassium hydroxide, zinc chloride, calcium chloride and a mixture of sodium carbonate and sodium bicarbonate.

25. (Previously presented) The combination of claim 18 wherein the fiber based material includes an electrostatic charge there across, said electrostatic charge capable of generating a potential across the surface of said fiber based material.

26. (Previously presented) The combination of claim 25 wherein the electrostatic charge is single or multi-layered.

27. (Previously presented) The combination of claim 26 wherein the electrostatic charge is about 25 Kv.

28-29. (Canceled)